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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/556,536 04/24/00 KIHARA

T M1866-25

EXAMINER

IM52/0629

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SHAW, C	
ART UNIT	PAPER NUMBER

1725

DATE MAILED:

06/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/556,536

Applicant(s)

KIHARA et al.

Examiner

C. SHAW

Group Art Unit

1725

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-8 is/are pending in the application.
- Of the above claim(s) 1 is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-8 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

**DETAILED ACTION**

1.) The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.) Claims 1 and 3 are rejected under 35 U.S.C. § 102(b) as being anticipated by McLandrich (4,377,403). Figure 2 in McLandrich and the discussion thereof discloses the subject matter claimed. Note that an arc is generated between tungsten electrodes 25 and 26 to weld glass fibers in elements 11 and 12. Note that glass is an "Si-based" material.

3.) The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

4.) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McLandrich taken with Guyer (2,590,173). The patent to McLandrich discloses the subject matter claimed except for the limitations associated with water cooling. This difference does not patentably distinguish over the prior art. At the time applicant's

invention was made, it would have been obvious to have water cooled one or both of the electrodes in McLandrich, the motivation being the teachings of Guyer (2,590,173) that it is advantageous to water cool arc electrodes used in heating glass (see elements 16 and 17 in figure 1 of Guyer (2,590,173) which serve to water cool the glass heating arcing electrode at 12).

5.) Claim 5 is rejected under 35U.S.C. 103(a) as being unpatentable over McLandrich taken with Guyer (2,590,173) further taken with Wroe (2,972,695). The only aspect of the claim to which the rejection above does not apply is the provision for a means for providing improved directionality to the arc. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have provided the electrodes in McLandrich with means for improving arc directionality the motivation being the teachings of Wroe that such means are advantageous in a non-consumable arc welder (see the means for improving directionality 16 in figure 5 of Wroe, discussed in the first paragraph of column 4 in the patent).

6.) Claims 6, 4, 7 are rejected under 35U.S.C. 103(a) as being unpatentable over McLandrich taken with Wroe. It would have been obvious to have provided the electrodes of McLandrich with means for improving arc directionality in view of the teachings of Wroe as discussed above. In regard to the claimed "raised portion" in claim 7, note that the element 16 in Wroe is raised away from the axis of electrode 14,15, thus satisfying the limitation.

7.) Claim 8 is rejected under 35U.S.C. 103(a) as being unpatentable over McLandrich taken with Edberg (4,628,180). The patent to McLandrich discloses the subject matter claimed except for the limitations associated with gradually extending the arc length. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have used any well known arc ignition technique in the system of McLandrich. In particular, it would have been obvious to have used an arc ignition technique wherein the electrodes 25 and 26 touch and then move apart, the motivation being the teachings of Edberg that when establishing an arc with a tungsten non-consumable electrode, it is advantageous to touch the anode and cathode electrodes together and draw them apart (see the discussion in column 1 of McLandrich), thereby satisfying the claim.

8.) The patents to Guyer (2,445,063), Smith (4,049,414), and Kammlott et al. (5,487,125) are cited to show prior art arc heating of silicon based material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ex. Clifford C. Shaw whose telephone number is (703)-308-1712. The telephone number for Official Faxes for art unit 1725 is (703)-305-7718

C. SHAW/ccs  
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6/28/01



**Clifford C. Shaw**  
**Primary Examiner**  
**Art Unit 1725**